

Applicant: Ludwig Brehm
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REMARKS

The Non-Final Office Action mailed November 9, 2011 and the references cited therein have been carefully considered. Claims 2, 3, 5-18 and 29-58 are currently pending. By the amendments herein, Applicant has canceled claims 38, 40, 51 and 53, however, no other claims amendments are introduced by this Response. Accordingly, no new matter has been introduced by the amendments presented herein. Applicant responds below to the issues raised in the subject Office Action.

Claim Rejections under 35 USC § 112

Claims 38, 40, 51 and 53 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In review of the cancellation of claims 38, 40, 51 and 53 by the amendments herein, this rejection has been rendered moot. Accordingly, Applicant respectfully requests withdrawal of the rejection of the claims under 35 U.S.C. §112.

Claim Rejections under 35 USC § 103

Claims 58, 2, 12-15, 18 and 29-31 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,491,324 to Schmitz et al. (**Schmitz**) in view of U.S. Patent No. 5,820,971 to Kaule et al. (**Kaule**) and U.S. Patent No. 6,395,120 to Bradbury-Harris (**Bradbury-Harris**). Applicant respectfully traverses this rejection.

The Office Action at page 5 admits that Schmitz does not specifically state that the adhesive layer is provided on the first film body and is a cross-linkable type. Thus, the Office Action proposes that Kaule teaches that an adhesive can either be applied to the first film body or

the transfer film, arguing that application of the adhesive on the first film body or the second film body are obvious variants. Applicant traverses this conclusion initially because it is founded on one particular embodiment disclosed in Schmitz, particularly in Figure 2 and column 4, lines 9-50 of that disclosure. That embodiment of Schmitz discloses a transfer foil with a magnetic layer (FIG. 2, carrier 7, separation layer 8, magnetic layer 5), the adhesive layer of the embodiment is part of the transfer foil, (see Figure 2: adhesive layer (column 4, lines 33-37)). Furthermore, Schmitz discloses that with regard to the transfer that, if only part of the transfer foil is to be transferred "*the transfer foil can be provided...and the latter detached and transferred from the all-overcoating only in the desired areas, e.g., by selective activation of the adhesive*" (see column 4, lines 47-49). This portion of the disclosure of Schmitz makes it clear that Schmitz does not disclose "engaging the first side of the film body with a second side of the second film body, the second film body forming a transfer film, the first side of the first film body having a radiation-crosslinkable adhesive layer." Rather, in Schmitz the adhesive layer is part of the transfer film and is not part of the target substrate. Furthermore, the adhesive layer according to Schmitz seems to be provided all-over the transfer foil, which is clear from the embodiment shown in Figure 2. Also, it is made further clear from the embodiments noted above that the adhesive layer is activated only in desired areas. Accordingly, the basic assumptions regarding the Schmitz disclosure that are used as the basis for this rejection are not supported by a reasonable interpretation of the disclosure of Schmitz.

Additionally, the Office Action combines Kaula with Schmitz by arguing that Kaula teaches that placing adhesive on the first film body and the second film body are obvious

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variants. In this regard, the Examiner's attention is directed to the embodiment according to Figure 3 of Kaule and further describes in column 5, lines 15-47 thereof. In this regard, Kaule discloses applying a reactive adhesive onto a target substrate, but that particular reactive adhesive is an adhesive which is only activate by irradiation with UV light (i.e. this adhesive develops its adhesive strength only after UV-activation--see column 5, lines 18-26). Accordingly, Kaule is not disclosing irradiation-crosslinkable adhesive layer as defined by Applicant's claims. It should be further noted from the embodiment of Figure 3 in Kaule that the irradiation of the adhesive is effected prior to applying the transfer foil onto the adhesive layer and not as defined by claim 54 of the present invention after applying the transfer foil onto the adhesive layer. Accordingly, one of ordinary skill would not interpret the disclosures of either Schmitz or Kaule as teaching "irradiating the engaged first and second film bodies, whereby the adhesive layer is hardened to thereby attach to the first portion of the magnetic layer to the hardened adhesive layer", as defined by pending claim 58. Accordingly, the combination of Schmitz and Kaule fail to teach all the elements of the claimed invention.

Additionally, the Office Action admits that Schmitz does not specifically state that the adhesive layer is in pattern form. Accordingly, Bradbury-Harris is cited to provide this missing element. However, the disclosure of Bradbury-Harris relates to a process of the application of a pigmented or metallic layer from a transfer foil to a substrate. The embodiment of Figure 3 of Bradbury-Harris is noted in the subject Office Action as disclosing an adhesive that is printed onto a substrate (16) on passing through an adhesive printing station (17). Then the substrate (16) passes to a station where the adhesive is cured using an ultraviolet light source (23) and then

a transfer layer of the transfer foil (28) is applied in a foiling station (25). Thus, if one of ordinary skill were to follow the teachings of Bradbury-Harris with regard to supplying an adhesive to the substrate, one of ordinary skill would not then follow the further steps defined by the claims, particularly “irradiating the engaged first and second film bodies, whereby the adhesive layer is hardened to thereby attach to the first portion of the magnetic layer to the hardened adhesive layer.” This further method step would not be performed to the Bradbury-Harris adhesive since it is irradiated prior to transferring it to the transfer foil (see page 3, column 8, lines 14-25). After curing the adhesive in Bradbury-Harris by an ultra-violet light (23), the adhesive is polymerized. The substrate then progresses together with the adhesive layer to a foiling station (25). In the foiling station, the substrate bearing the cured adhesive is heated to render the adhesive tacky in order to enable the transfer of the pigmented and metallic layer. The Bradbury-Harris adhesive layer is applied prior to engaging the first film body to the second film body and the adhesive is activated by heating the adhesive layer.

Accordingly, the combination of Schmitz, Kaule and Bradbury-Harris fails to disclose or reasonably suggest all the elements of the claimed invention, particularly as defined by claims 58, 2, 12-15, 18 and 29-31. Applicant thus respectfully requests reconsideration and withdrawal of the rejection of claims 58, 2, 12-15, 18 and 29-31.

Additionally, Claims 7-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Bradbury-Harris and further in view of U.S. Patent Publication No. 2004/0256986 to Yadav (**Yadav**). While Yadav is cited for teaching the use of magnetic nanoparticles, Yadav fails to disclose those missing elements of the claims noted

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above with regard to claim 58, from which claims 7-9 depend. Accordingly, any combination of Schmitz, Kaule, Bradbury-Harris and Yadav fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 7-9.

Further, Claims 10 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Bradbury-Harris and further in view of European Patent Application No. EP 0953937 to Power et al. (**Power**). While Power is cited for teaching the use of amorphous metal glass, Power fails to disclose those missing elements of the claims noted above with regard to claim 58, from which claims 10 and 11 depend. Accordingly, any combination of Schmitz, Kaule, Bradbury-Harris and Power fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 10 and 11.

Further still, Claims 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Bradbury-Harris and further in view of WO 99/65699 to Harris et al. (**Harris**). While Harris is cited for teaching the use of intaglio printing, Power fails to disclose those missing elements of the claims noted above with regard to claim 58, from which claims 16 and 17 depend. Accordingly, any combination of Schmitz, Kaule, Bradbury-Harris and Harris fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 16 and 17.

The further cited prior art fails to teach or reasonably suggest either the missing elements or the needed motivation or reason to arrive at the invention as defined by the claims.

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Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 7-11, 16 and 17 as noted above.

Further still, Claims 32, 3, 5, 6, 39-41, 44, 45, 52-54 and 57 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Japanese Patent No. JP 363030843 to Uchiyama et al. (**Uchiyama**) or in the alternative to Uchimaya, U.S. Published Patent Application No. 2005/0153107 to Iijima (**Iijima**). Applicant respectfully traverses this rejection. Similarly, the rejections of the subject office action of claims 42, 43, 55 and 56 in paragraph 50; claims 33-35 and 46-48 in paragraph 53; and claims 36-38 and 49-51 in paragraph 57 based in part on Uchiyama are similarly traversed.

As an initial matter, the Office Action at page 14, paragraph 40 relies on the combination of Schmitz and Kaule by acknowledging that Schmitz does not specifically state that the irradiation operation is affected prior to application of the transfer film. Thus, in this regard, Kaule was cited for teaching that the irradiation procedure could be affected either before or after placing the two films together. But where the irradiation procedure is affected prior to placing the two films together, a delayed-curing adhesive is used. In other words, it is clear that in using a delayed-curing adhesive, the adhesive layer will not be hardened at the time it is applied to the transfer film. However, in following this procedure it can not be said that “the transfer film is applied to the adhesive layer which is hardened structured in patterned form, and” as currently defined by both independent Claims 32 and 45. Accordingly, even combining the teachings of Schmitz and Kaule as proposed by the Office Action would not arrive at all the elements of the claimed invention, particularly this aspect of the disclosed technologies.

What is more, one of ordinary skill would be led away from arriving at the claimed process when considering the teachings of Schmitz and Kaule. In particular, using the embodiment of Kaule noted in the subject Office Action (column 5, lines 10-55) the adhesive layer is UV-radiated prior to engaging the two film bodies. Thus, the adhesive layer is hardened with UV light radiation and activation of the adhesive layers affected in a later step by heating the substrate correspondingly. Therefore, a person skilled in the art who might take into consideration to combine these two teachings would at best effect a subsequent activation of the adhesive layer by heating only in desired regions. Consequently, an ordinary practitioner would not be induced to expose the adhesive layer to UV light in pattern form as further defined by the claims, particularly independent claims 32 and 45. The exposure to a light is necessary for drying the adhesive layer. Therefore, a person of ordinary skill in the art would endeavor to drive the adhesive layer entirely and across its entire surface and thus would be led away from the subject matter of the present invention as defined particularly by claims 32 and 45. Thus, for this further reason the combination of Schmitz and Kaule fail to arrive at these particular aspects of the claimed invention.

Additionally, the subject Office Action admits that Schmitz does not specifically state that the magnetic layer remains on the first film body in an area where the adhesive layer is not hardened and is removed with the carrier film in a region where the adhesive layer is hardened. In this regard, Uchiyama is cited at page 14, paragraph 41 of the subject Office Action for disclosing transferring a pattern to a base without swelling in a lower cost manner by hardening parts of the adhesive not opposite the pattern with ultraviolet rays. However, Applicant traverses

that this conclusion as to the teachings disclosed by Uchiyama. Considering Uchiyama the abstract along with Figure 1 describes an all-over adhesive layer (8) is applied to a release paper (9). Then in a pattern paper (7) is applied to the surface of the adhesive layer. This pattern seems to serve as a kind of shadow mask, which ensures that those regions of the adhesive being provided below the pattern are not exposed to light when the pattern is irradiated. Thus, those regions which are not covered by the layer which is structured in pattern form are exposed to light and hardened. As a result, the hardened layer (8) remains on the pattern when the release paper is removed and serves to transfer the pattern shaped layer (6) to the target substrate. Thus, the disclosure of Uchiyama discloses a kind of transfer foil having a transfer layer which is structured in patterned form, in that those regions which are not provided by a pattern are removed by means of the pattern which serves as an exposure mask, as well as by means of a corresponding deviation of the adhesive. In this way, only those regions which are provided by a layer which is structured in pattern form (6) and an adhesive coating (8) on the patterned layer are left. This is particularly shown in the drawing according to Figure 1, right column, third image. In the subsequent process step, the transfer foil is then applied to the target substrate (1) and removed from the paper (7) to serve replacing the pattern (6) onto the target substrate (10). (NOTE: the fourth and fifth images in the right hand column of Figure 1).

Thus, even if a person of ordinary skill to consider combining the teachings of Schmitz, Kaule and Uchiyama, he or she would perhaps produce a transfer foil having separated regions as taught by Uchiyama. However, this would teach away from the subject matter defined by the

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claims, where it is precisely claimed to provide the adhesive layer on the target substrate and to provide the layer to be transferred all-over the transfer foil.

Furthermore, as best understood from the Abstract and Figures, Uchiyama discloses that no region is removed in any way from the layer to be transferred, such as from the pattern (6). Instead Uchiyama removes part of the adhesive layer by applying it onto the target substrate. As shown in Figure 1, no part of the layer which is structured in patterned form (6) is removed in the region which is provided with the carrier foil of the transfer film where the adhesive layer has been hardened. Rather, the adhesive layer is exposed to light by means of a layer which is structured in pattern form (6) which serves as a shadow mask. Accordingly, the combination of Schmitz, Kaule and Uchiyama fail to teach a reasonable disclosed all the aspects of the claimed invention, particularly as defined by independent claims 32 and 45.

Alternatively, the office action cites U.S. Published Patent Application No 2005/0153107 to Iijima (**Iijima**) in combination with Schmitz and Kaule to arrive at the invention defined by the claims, particularly independent claims 32 and 45. Applicant respectfully traverses this alternative version of the rejection since Applicant's invention was reduced to practice prior to the effective date of the Iijima patent application. Applicant submits herewith a declaration swearing behind Iijima, in accordance with 37 C.F.R. §1.131, and supporting documents to demonstrate a reduction to practice of the claimed invention prior to the effective date of Iijima and diligent efforts to file a patent application related to that invention. Similarly, the alternative rejections of the subject office action of claims 42, 43, 55 and 56 in paragraph 50; claims 33-35

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and 46-48 in paragraph 53; and claims 36-38 and 49-51 in paragraph 57 based in part on Iijima are similarly traversed.

The Iijima patent application was filed on *January 12, 2004*, whereas the instant patent application claims priority to German patent application 10 2004 004 713.8, filed *January 30, 2004*. However, Applicant submits herewith a draft of the priority German patent application with annotations and notes that was mailed to his attorneys on December 30, 2003. That written disclosure, dated almost two weeks prior to the Iijima effective date, supports a finding that Applicant's date of invention is prior to the effective date of Iijima. Subsequently, Applicant diligently worked with his attorneys to file a patent application directed to the instant claimed invention. It should be noted that due to the time constraints in filing the instant response, Applicant was unable to include an English-language translation of the German-language documents submitted in support of the inventor's swearing-back declaration. However, translations of the German-language documents filed herewith, as well as the underlying priority German patent application will follow shortly. Should the later filing of such translation documents necessitate an extension of time and any additional fees be paid in this matter, Applicant hereby authorizes such fees be paid in accordance with the fee authorization previously indicated during this prosecution and requests any appropriate extension of time.

The rule 1.131 declaration by inventor Dr. Ludwig Brehm submitted herewith attests to the fact that he had a printed draft of his patent application, with annotations and accompanying notes, mailed to his attorneys, Louis, Pöhlau, Lohrentz & Segeth on December 30, 2003. A copy of a transmittal letter to his attorneys, with two pages of notes and the accompanying draft

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annotated patent application are submitted herewith and identified as "Exhibit_A_1093-160pct-us-rce" – referred to herein as just "Exhibit A"). The transmittal letter is dated December 30, 2003 and is sent from Dr. Brehm's employer and current assignee of this patent application, Leonhard Kurz. That cover letter is accompanied by a letter signed by Dr. Brehm, with the same date, addressed to Norbert Zinsinger, an attorney for Louis, Pöhlau, Lohrentz & Segeth, to which the undersigned can attest. The letter from Dr. Brehm refers to the draft patent application being transmitted with it, as well as some further notes regarding the application. Also, Dr. Brehm's letter indicates that due to the end-of-year holidays, he would be away on vacation until January 11, 2004. That draft patent application with accompanying cover letter and notes supports the contention that the claimed invention was reduced to practice by the Applicant before the effective date of the Iijima prior art reference.

The declaration by Dr. Brehm further attests to the fact that upon his return from vacation in January he received a revised draft of the subject priority Germany patent application via facsimile on January 14, 2004. Over the course of the week that followed, he reviewed the draft patent application and sent further revisions to select pages of that application, once again to his attorneys on January 26, 2004, reusing the cover letter sent to him for that draft of the application. Two days later, he took part in a teleconference with those same attorneys regarding the patent application and it was mailed to the German Patent Office the very next day. Unlike the U.S. Patent and Trademark Office, the German Patent Office does not provide for Express Mail dates for application filings and thus the priority German patent application was given a filing date of the date it was received by them, namely January 30, 2004.

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Thus, the declaration of Dr. Brehm and the related documents submitted herewith demonstrate that Applicant's invention as defined by the pending claims was reduced to practice at least by December 30, 2003. Also, subsequent to December 30, 2003, Applicant's invention was not abandoned, suppressed nor concealed. The description of the invention in support of the priority German patent application was diligently worked-on from December 30, 2003, through the New Year holidays and up until the filing of the foreign priority application on January 30, 2004. Thus, Applicant's invention pre-dates the effective date of Iijima, which means Iijima should not be considered prior art as against Applicant's claims. Also, since the subject office action acknowledges that the combination of Schmitz and Kaule alone fail to teach or reasonably disclose all the aspects of the claimed invention, the rejections of the claims based on Schmitz, Kaule and Iijima should be withdrawn.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 32, 3, 5, 6, 39-41, 44, 45, 52-54 and 57 as obvious under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Uchiyama or in the alternative to Uchimaya, in view of Iijima. Similarly, the alternative rejections of the subject office action of claims 42, 43, 55 and 56 in paragraph 50; claims 33-35 and 46-48 in paragraph 53; and claims 36-38 and 49-51 in paragraph 57 based in part on either Uchiyama or Iijima should be withdrawn.

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Conclusion

Entry of the amendments herein and favorable consideration of Claims 2, 3, 5-18 and 29-37, 39, 41-50, 52 and 54-58 is hereby solicited. In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner has any questions or suggestions to expedite allowance of this application, the Examiner is cordially invited to contact Applicant's attorney at the telephone number provided.

Respectfully submitted,

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